

Product Type	Integrated Communication Processor and Digital Signal Processor
Freescale Part #	BSC9131E, BSC9132E
Package	BSC9131 520 pin 21x21mm FC-PBGA BSC9132 780 pin 23x23mm FC-PBGA
Crypto Hardware	SEC 4.4

<u>Algorithms</u>	<u>Max Key Size (bits)</u>
DES (ECB, CBC, OFB, CFB)	56
3DES (ECB, CBC, OFB, CFB)	168 (3-keys)
AES (ECB, CBC, CTR, CCM, CMAC, GCM, OFB, CFB, XCBC-MAC)	256
ARC-4	128
MD-5 + HMAC	(up to 512 bit keys)
SHA-1 + HMAC	(up to 512 bit keys)
SHA-224 + HMAC	(up to 512 bit keys)
SHA-256 + HMAC	(up to 512 bit keys)
SHA-384 + HMAC	(up to 512 bit keys)
SHA-512 + HMAC	(up to 512 bit keys)
Kasumi (A5/3, GEA-3, f8, f9)	128
Snow 3G	128
RSA Digital Signature	4096-bit operands
RSA Digital Verify	4096-bit operands
ECC Digital Signature	1023-bit field or modulus size
ECC Digital Verify	1023-bit field or modulus size
FIPS compliant deterministic RNG	On chip 32-bit

Target Applications :
Wireless base stations, Wireless LAN Access Points

Export Control Info:
Harmonized Tariff (US): 8542.31.0000
ENC Status: Restricted. US EAR part 740.17(b)(2)
ECCN: 5A002.A.1
CCAT: G152017

Overview:
The BSC9131E and BSC9132E are members of the QorIQ Qonverge family of combined integrated communications processor plus digital signal processor aimed at the pico-cell wireless market from Freescale Semiconductor.

The BSC9131E incorporates (1) 32b e500 Power Architecture CPU core, (1) SC3850 DSP Core, (1) DDR3 Memory Controller, (2) 1G Ethernet controllers, (1) USB, and CPRI RF interface.

The BSC9132E incorporates (2) 32b e500 Power Architecture CPU cores, (2) SC3850 DSP cores, (1) DDR3 Memory Controller, (2) 1G Ethernet controllers, (1) USB, and CPRI RF interface.

The BSC9131E and BSC9132E also provide support for secure boot and platform assurance.

The BSC9131E and BSC9132E also integrate a 2Gbps Crypto Acceleration Engine (SEC 4.4). The algorithms and key lengths supported by the SEC 4.4 are listed in the table above.

In addition to crypto algorithm processing, the SEC 4.4 supports security protocol processing off-load capability, with specific support for protocol header and trailer processing for IPsec, SSL, DTLS, SRTP, MACSec, 802.16e, and 802.11e. The SEC 4.2 is expected to achieve 5000+ public key exchanges per second.

NOTE 1: This authorization does not authorize the export of products designed to use the encryption functionality of these chips. Such products may require a classification and/or license from the Bureau of Industry and Security (BIS) prior to export. OEMs incorporating these chips in their products should call the BIS Encryption Export Support Line at 202-482-0707 with specific questions.

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